

REMARKS

Claims 1-36 and 43 were pending in this application. Claims 1, 3, 4, 7, 8, 9, 11, 13, 14, 15, 18, 20, 21, 22, 25, 26, 27, and 31 have been amended and new claims 45-59 have been added. The amendments made herein are for clarification purposes only, and do not narrow the scope of the claims.

Claims 1, 4, 7, 8, 9, 11, 13, 15, 21, and 20-22 have been amended to replace the term “target” with “bacterial.” Support for this amendment can be found in the specification, for example at page 5, lines 4-5 and 28-29, and page 29, lines 5-9 and 18-19. Claim 9 has also been amended by replacing the term “deletion” with “the loss”.

Claims 1 and 13 have also been amended to clarify that the term “sequence modules” by replacement with the term “DNA molecules.” Support for this amendment in the specification can be found, for example on page 3, line 8. Claims 1 and 13 have also been amended to expressly recite the bacterial cells selected in step (b). Support for this amendment can be found, for example on page 29, lines 18-19 and page 15, lines 30-34. Claims 1 and 13 have been further amended to replace the term “so that” with the term “thereby generating” and the term “is generated” has been deleted.

Claims 3, 4, 14 and 18 have been amended for simplification purposes.

Claim 20 has also been amended and to provide proper antecedent basis for the step number.

Claim 21 has also been amended to remove the dependency on claim 13 and to provide proper antecedent basis for the step number.

Claim 22 has been amended by replacing the term “derived” with “obtained” and amended to provide proper antecedent basis for the step number.

Claims 25 and 26 have been amended to provide proper antecedent basis for the step number. Claim 26 has been further amended to correct a typographical error by replacing the term “recombinant” with “recombination.”

Claim 27, 28, and 31 have been amended to provide proper antecedent basis for the term “donor vector.”

New claims 45-59 have been added. New claims 45-58 correspond to claims 21, 22, and 25-36 to the extent that such claims depended from claim 13. Support for claim 45 can be found, for example on page 6, lines 31-33. Support for claim 46 can be found, for example on page 6, lines 33-37. Support for claim 47 can be found, for example on page 7, lines 2-4. Support for claim 48 can be found, for example on page 7, lines 4-5. Support for

claims 49-54 can be found, for example on page 7, lines 5-9. Support for claims 55 and 56 can be found, for example on page 7, lines 32-33. Support for claim 57 and 58 can be found, for example on page 6, lines 16-18. Support for claim 59 can be found, for example on page 6, lines 24-30.

No new matter is added. Following entry of the amendments made herein, claims 1-36, 43, and 45-59 will be pending in the instant application.

Compliance with 37 C.F.R. 1.821 through 1.825 Regarding Sequence Disclosures

The Examiner indicated that the present application does not comply with the requirements of 37 C.F.R. 1.821 through 1.825 because sequences presented in Figures 16 and 17 of the instant application were set forth that lack sequence identifiers.

In response, Applicant has amended the description of Figures 16 and 17 to correctly identify the sequences presented therein by SEQ ID NO. Applicant thus respectfully requests that the objection to the specification under 37 C.F.R. 1.821 through 1.825 be withdrawn.

The Objection Under 37 C.F.R. 1.75(c), Should Be Withdrawn

The Examiner has objected to claims 27, 29, 31, 33 and 35 under 37 C.F.R. § 1.75(c) as being improper form because a multiple dependent claim cannot depend from a multiply dependent claim.

In response, Applicant has amended the claims objected to by the Examiner such that no multiple dependent claim depends from a multiply dependent claim. In particular, claim 21 has been amended to delete the dependency on claim 13 and new claims 45-58, corresponding to claims 21, 22, and 25-36 insofar as such claims depended from claim 13, have been added.

Applicant requests that the objection to claims 27, 29, 31, 33 and 35 under 37 C.F.R. § 1.75(c) be withdrawn in view of the amendments made herein.

The Rejection Under 35 U.S.C. § 112, Second Paragraph, Should Be Withdrawn

Claims 1-26, 28, 30, 32, 34, 36 and 43 are rejected under 35 U.S.C. § 112, second paragraph, allegedly as being indefinite for failing to particularly point out and distinctly claim the subjected matter which Applicant regards as the invention.

The rejection of claims 1 and 13

The Examiner states that claims 1 and 13 are both vague and indefinite in that the end result of the claimed method does not necessarily recapitulate the desired result recited in the preamble of the claim. The Examiner contends that the methods are directed to the generation of a population of variant sequence modules, but there are no steps that clearly relate to the result of producing a population of variant sequence modules.

Without agreeing with the Examiner, and merely to expedite prosecution, Applicant has amended step (b) of claims 1 and 13 to expressly recite that which is inherent in these claims, *i.e.*, the selection of bacterial cells that do not contain a negatively selectable marker, wherein said loss of the marker has occurred via recombination between the donor vector and the target vector.

With respect to the Examiner's remark about the lack of an explanation in the claim of the terms "sequence module" and "population of sequence variants," Applicant has amended the claim by replacing "sequence module" with "DNA molecules" to clarify that populations of variant DNA molecules are generated.

In view of the foregoing, Applicant submits that the rejection of claims 1 and 13 under 35 U.S.C. § 112, second paragraph, has been obviated and should be withdrawn.

The rejection of claim 22

Claim 22 is rejected under 35 U.S.C. § 112, second paragraph, because the term "derived from" allegedly renders the claim indefinite. The Examiner notes that the number and nature of steps required in order to generate a "derivative" of a recombination module is unclear. The Examiner notes that this rejection would be overcome if Applicant amended the claim by substituting the term "derived from" with the term "obtained from."

Without agreeing that the term "derived from" is vague, and merely to expedite prosecution, Applicant has accordingly clarified the claim by substituting the term "derived from" with the term "obtained from" as proposed by the Examiner. Applicant respectfully requests that the rejection be withdrawn.

The rejection of claim 43

Claim 43 is rejected under 35 U.S.C. § 112, second paragraph, for the recitation of an "archived module," which the Examiner states is vague and unclear.

Applicant respectfully disagrees and points to page 44, lines 27 to 33 of the specification for a discussion of the term "archived module." In particular, the specification defines an "archived module" as "a donor DNA sequence or target DNA sequence, whether or not the target sequence has undergone DGA or phenotype optimization, where the sequence comprising the archived module is known or has been demonstrated to encode a protein segment or domain that provides a particular function (*e.g.*, ligand binding, enzymatic activity, structural activity), and has been sorted and catalogued (archived), *e.g.*, for future use, such as future use in similar or different DGA situations."

Applicant submits that one of skill in the art can readily ascertain the meaning of the term "archived module" based on the teaching in the specification. In view of the foregoing, Applicant submits that the rejection of claim 43 under 35 U.S.C. § 112, second paragraph, is in error and should be withdrawn.

CONCLUSION

Applicant respectfully requests that the present amendment and remarks be entered and made of record in the instant application. Claims 1-36, 43, and 45-58 fully meet all statutory requirements for patentability. Withdrawal of the Examiner's rejections and allowance and action for issuance are respectfully requested. Applicant respectfully requests that the Examiner call the undersigned if any questions or issues remain.

Respectfully submitted,

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